☐ 0 Hours

☐ 24 Hours

☐ 48 Hours

48 h
24 h
0 h

Ethionamide 5 ug/ml

Cycloserine 40 ug/ml

KOA 30ug/ml

KOA 10 ug/ml

Unasyn 75 ug/ml

Unasyn 37 ug/ml

Ampicilin 200 ug/ml

Ampicilin 100 ug/ml

EMB 5 ug/ml

EMB 1 ug/ml

INH + rifampin 5ug/ml

INH 1.0 ug/ml

INH 0.2 ug/ml

ph 4.0

ph 6.0

PZA ph 6.0

PAS 10 ug/ml

SNAP

Rifampin 5 ug/ml

Ciprofloxicin 20 ug/ml

Kanamycin 6 ug/ml

Heat shock 420C

H_2O_2 0.25mM

H_2O_2 25mM

No abx

26

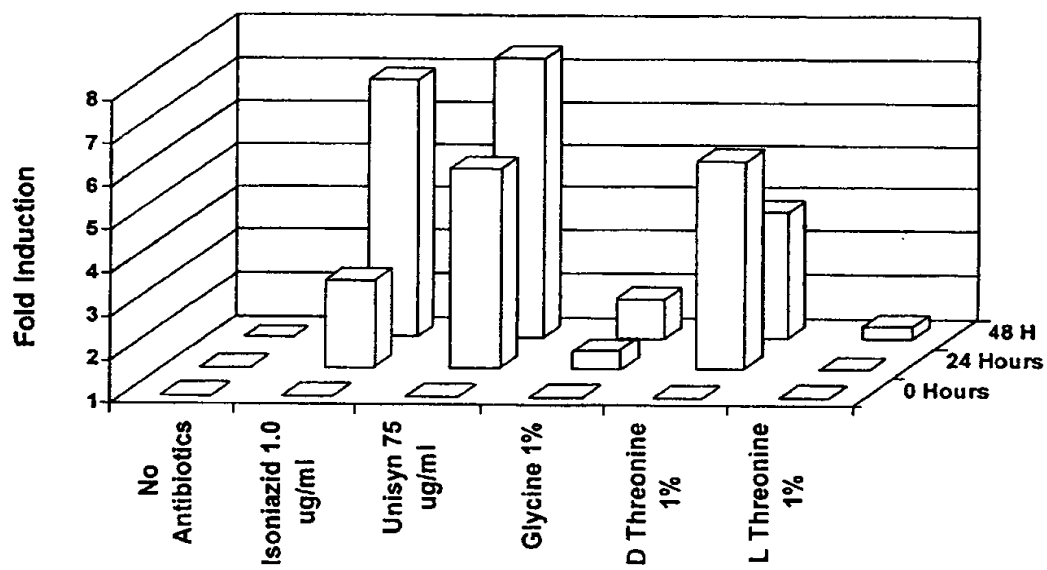21

16

11

6

1

Fold Induction

FIG. 3

FIG. 4

Cosmid MTCY279:

9048 cac ggctacgaca
9061 tccacggata agttccggac cggcgtaggg gtgccccatt

Cosmid MTY13E10:

```
   1 tcccctaatc ccctaacgcg gcggccaggc cgatcccgat aggtgtttgg ccggcttgcg
  61 gatcagaccc cgatttcggg gtgaggcgga atccatagcg tcgatggcac agcgccggtc
 121 acgccggcga acagcttctt cgattgaagg gaaatgaaga tgacctcgct tatcgattac
 181 atcctgagcc tgttccgcag cgaagacgcc gcccggtcgt tcgttgccgc tccgggacgg
 241 gccatgacca gtgccgggct gatcgatatc cgccgcacc aaatctcatc ggtggcggcc
 301 aatgtggtgc cgggtctgaa tctgggtgcc ggcgacccca tgagcggatt cggcaggcc
 361 gtcgccgctc ggcatggctt tgcgcaggac gtcgccaatg tcggcttcgc cggtgacgcg
 421 ggcgcggggg tggcaagcgt catcacgacc gatgtcggtg cgggcctggc tagcggactg
 481 ggtgctgggt tcctgggtca gggtggcctg gctctcgccg cgtcaagcgg tggtttcggc
 541 ggtcaggtcg gcttggctgc ccaggtcggt ctgggtttta ctgccgtgat tgaggccgag
 601 gtcggcgctc aggttggtgc tgggttaggt attgggacgg gtctgggtgc tcaggccggt
 661 atgggctttg gcggcggggt tggcctgggc ctgggtggtc aggccggcgg tgtgatcggt
 721 gggagcgcgg ccggggctat cggtgccggc gtcggcggtc gcctaggcgg caatggccag
 781 atcggagttg ccggccaggg tgccgttggc gctggtgtcg gcgctggtgt cggcggccag
 841 gcgggcatcg ctagccagat cggtgtctca gccggtggtg ggctcggcgg cgtcggcaat
 901 gtcagcggcc tgaccggggt cagcagcaac gcagtgttgg cttccaacgc aagcggccag
 961 gcggggttga tcgccagtga aggcgctgcc ttgaacggcg ctgctatgcc tcatctgtcg
1021 ggcccgttag ccggtgtcgg tgtgggtggt caggccggcg ccgctggcgg cgccgggttg
1081 ggcttcggag cggtcgggca cccgactcct cagccggcgg ccctgggcgc ggctggcgtg
1141 gtggccaaga ccgaggcggc tgctggagtg gttggcgggg tcggcggggc aaccgcggcc
1201 ggggtcggcg gggcacacgg cgacatcctg ggccacgagg gagccgcact gggcagtgtc
1261 gacacggtca acgccggtgt cacgcccgtc gagcatggct tggtcctgcc cagtggcccc
1321 ctgatccacg gcggtaccgg cggctatggc ggcatgaacc cgccagtgac cgatcgccg
1381 gcaccgcaag ttccggcgcg ggcccagccg atgaccacgg cggccgagca cacgccggcg
1441 gttacccaac cgcagcacac gccggtcgag ccgccggtcc acgataagcc gccgagccat
1501 tcggtgtttg acgtcggtca cgagccgccg gtgacgcaca cgccgccggc gcccatcgaa
1561 ctgccgtcgt acggcctttt cggactaccc gggttctgat tcgcgagccg atttcacgaa
1621 ccggtgggga cgttcatggt ccccgccggt ttgtgcgcat accgtgatct gaggcgtaaa
1681 cgagcgagaa agtggggcga cacggtgacc cagcccgatg acccacgtcg ggtcggtgtg
1741 atcgtcgaac tgatcgatca cactatcgcc atcgccaaac tgaacgagcg tggtgatcta
1801 gtacagcggt tgacgcgggc tcgccagcgg atcaccgacc cgcaggtccg tgtggtgatc
```

FIG. 5A

1861 gccgggctgc tcaaacaggg caagagtcaa ttgctcaatt cgttgctcaa cctgcccgcg
1921 gcgcgagtag gcgatgacga ggccaccgtg gtgatcaccg tcgtaagcta cagcgcccaa
1981 ccgtcggccc ggcttgtgct ggccgccggg cccgacggga caaccgcagc ggttgacatt
2041 cccgtcgatg acatcagcac cgatgtgcgt cgggctccgc acgccggtgg ccgcgaggtg
2101 ttgcgggtcg aggtcggcgc gcccagcccg ctgctgcggg gcgggctggc gtttatcgat
2161 actccgggtg tgggcggcct cggacagccc cacctgtcgg cgacgctggg gctgctaccc
2221 gaggccgatg ccgtcttggt ggtcagcgac accagccagg aattcaccga acccgagatg
2281 tggttcgtgc ggcaggccca ccagatctgt ccggtcgggg cggtcgtggc caccaagacc
2341 gacctgtatc cgcgctggcg ggagatcgtc aatgccaatg cagcacatct gcagcgggcc
2401 cgggttccga tgccgatcat cgcagtctca tcactgttgc gcagccacgc ggtcacgctt
2461 aacgacaaag agctcaacga agagtccaac tttccggcga tcgtcaagtt tctcagcgag
2521 caggtgcttt cccgcgcgac ggagcgagtg cgtgctgggg tactcggcga aatacgttcg
2581 gcaacagagc aattggcggt gtctctaggt tccgaactat cggtggtcaa cgacccgaac
2641 ctccgtgacc gacttgcttc ggatttggag cggcgcaaac gggaagccca gcaggcggtg
2701 caacagacag cgctgtggca gcaggtgctg ggcgacgggt tcaacgacct gactgctgac
2761 gtggaccacg acctacgaac ccgcttccgc accgtcaccg aagacgccga cgccagatc
2821 gactcctgtg acccgactgc gcattgggcc gagattggca cgacgtcga gaatgcgatc
2881 gccacagcgg tcggcgacaa cttcgtgtgg gcataccagc gttccgaagc gttggccgac
2941 gacgtcgctc gctcctttgc cgacgcgggg ttggactcgg tcctgtcagc agagctgagc
3001 ccccacgtca tgggcaccga cttcggccgg ctcaaagcgc tgggccggat ggaatcgaaa
3061 ccgctgcgcc ggggccataa aatgattatc ggcatgcggg gttcctatgg cggcgtggtc
3121 atgattggca tgctgtcgtc ggtggtcgga cttgggttgt tcaacccgct atcggtgggg
3181 gccgggttga tcctcggccg gatggcatat aaagaggaca aacaaaaccg gttgctgcgg
3241 gtgcgcagcg aggccaaggc caatgtgcgg cgcttcgtcg acgacatttc gttcgtcgtc
3301 agcaaacaat cacgggatcg gctcaagatg atccagcgtc tgctgcgcga ccactaccgc
3361 gagatcgccg aagagatcac ccggtcgctc accgagtccc tgcaggcgac catcgcggcg
3421 gcgcaggtgg cggaaaccga gcgggacaat cgaattcggg aacttcagcg gcaattgggt
3481 atcctgagcc aggtcaacga caaccttgcc ggcttggagc caaccttgac gccccgggcg
3541 agcttgggac gagcgtgagc accagcgacc gggtccgcgc gattctgcac gcaaccatcc
3601 aggcctaccg gggtgcgccg gcctatcgtc agcgtggcga cgttttttgc cagctggacc
3661 gcatcggtgc gcgcctagcc gaaccgctgc gcatcgcgtt ggctggcaca ctcaaggccg
3721 gaaaatccac tctcgtcaac gcccttgtcg gcgacgacat cgctccgacc gatgccaccg
3781 aggccacccg gattgtgacc tggttccggc acggtccgac accgcgggtc accgccaacc
3841 atcgcggcgg tcgacgcgcc aacgtgccga tcacccgtcg gggcgggctg agtttcgacc
3901 tgcgcaggat caacccggcc gagctgatcg acctggaagt cgagtggcca gccgaggaac
3961 tcatcgacgc caccattgtt gacaccccgg gaacgtcgtc gttggcatgc gatgcctccg
4021 agcgcacgtt gcggctgctg gtccccgccg acggggtgcc tcgggtggat gcggtggtgt
4081 tcctgttgcg cacccctgaac gccgctgacg tcgcgctgct caaacagatc ggtgggctgg
4141 tcggcgggtc ggtgggagcc ctgggcatca tcggggtggc gtctcgcgcg gatgagatcg
4201 gcgcgggccg catcgacgcg atgctctcgg ccaacgacgt ggccaagcgg ttcacccgcg
4261 aactgaacca gatgggcatt tgccaggcgg tggtgccggt atccggactt cttgcgctga

FIG. 5B

4321 ccgcgcgcac actgcgccag accgagttca tcgcgctgcg caagctggcc ggtgccgagc
4381 gcaccgagct caatagggcc ctgctgagcg tggaccgttt tgtgcgccgg gacagtccgc
4441 taccggtgga cgcgggcatc cgtgcgcaat tgctcgagcg gttcggcatg ttcggcatcc
4501 ggatgtcgat tgccgtgctg gcggccggcg tgaccgattc gaccgggctg ccgccgaac
4561 tgctggagcg cagcgggctg gtggcgctgc gcaatgtgat agaccagcag ttcgcgcagc
4621 gctccgacat gcttaaggcg cataccgcct tggtctcctt gcgccgattc gtgcagacgc
4681 atccggtgcc ggcgaccccg tacgtcattg ccgacatcga cccgttgcta ccgacacccc
4741 acgccttcga agaactccga atgctaagcc ttttgccttc gcgggcaacg acattgaacg
4801 acgacgaaat cgcgtcgctg cgccgcatca tcggcgggtc gggcaccagt gccgccgctc
4861 ggctgggcct ggatcccgcg aattctcgcg aggccccgcg cgccgcgctg gccgcagcgc
4921 aacactggcg tcgccgtgcg gcgcatccac tcaacgatcc gttcactacc agggcctgtc
4981 gcgcggcggt gcgcagcgcc gaggcgatgg tggcggagtt ctctgctcgc cgctga

FIG. 5C

Rv0341 (iniB)

MTSLIDYILSLFRSEDAARSFVAAPGRAMTSAGLIDIAPHQISSVAANVVPGLNLGAGDPMSGL
RQAVAARHGFAQDVANVGFAGDAGAGVASVITTDVGAGLASGLGAGFLGQGGLALAASSGG
FGGQVGLAAQVGLGFTAVIEAEVGAQVGAGLGIGTGLGAQAGMGFGGGVGLGLGGQAGGVI
GGSAAGAIGAGVGGRLGGGNGQIGVAGQGAVGAGVGAGVGGQAGIASQIGVSAGGGLGGVGN
VSGLTGVSSNAVLASNASGQAGLIASEGAALNGAAMPHLSGPLAGVGVGGQAGAAGGAGLG
FGAVGHPTPQPAALGAAGVVAKTEAAAGVVGGVGGATAAGVGGAHGDILGHEGAALGSVDT
VNAGVTPVEHGLVLPSGPLIHGGTGGYGGMNPPVTDAPAPQVPARAQPMTTAAEHTPAVTQ
PQHTPVEPPVHDKPPSHSVFDVGHEPPVTHTPPAPIELPSYGLFGLPGF

Rv0342 (iniA)

MVPAGLCAYRDLRRKRARKWGDTVTQPDDPRRVGVIVELIDHTIAIAKLNERGDLVQRLTRA
RQRITDPQVRVVIAGLLKQGKSQLLNSLLNLPAARVGDDEATVVITVVSYSAQPSARLVLAAGP
DGTTAAVDIPVDDISTDVRRAPHAGGREVLRVEVGAPSPLLRGGLAFIDTPGVGGLGQPHLSA
TLGLLPEADAVLVVSDTSQEFTEPEMWFVRQAHQICPVGAVVATKTDLYPRWREIVNANAAH
LQRARVPMPIIAVSSLLRSHAVTLNDKELNEESNFPAIVKFLSEQVLSRATERVRAGVLGEIRSA
TEQLAVSLGSELSVVNDPNLRDRLASDLERRKREAQQAVQQTALWQQVLGDGFNDLTADVD
HDLRTRFRTVTEDAERQIDSCDPTAHWAEIGNDVENAIATAVGDNFVWAYQRSEALADDVA
RSFADAGLDSVLSAELSPHVMGTDFGRLKALGRMESKPLRRGHKMIIGMRGSYGGVVMIGML
SSVVGLGLFNPLSVGAGLILGRMAYKEDKQNRLLRVRSEAKANVRRFVDDISFVVSKQSRDRL
KMIQRLLRDHYREIAEEITRSLTESLQATIAAAQVAETERDNRIRELQRQLGILSQVNDNLAGL
EPTLTPRASLGRA

Rv0343 (iniC)

MSTSDRVRAILHATIQAYRGAPAYRQRGDVFCQLDRIGARLAEPLRIALAGTLKAGKSTLVNAL
VGDDIAPTDATEATRIVTWFRHGPTPRVTANHRGGRRANVPITRRGGLSFDLRRINPAELIDL
EVEWPAEELIDATIVDTPGTSSLACDASERTLRLLVPADGVPRVDAVVFLLRTLNAADVALLKQI
GGLVGGSVGALGIIGVASRADEIGAGRIDAMLSANDVAKRFTRELNQMGICQAVVPVSGLLAL
TARTLRQTEFIALRKLAGAERTELNRALLSVDRFVRRDSPLPVDAGIRAQLLERFGMFGIRMSI
AVLAAGVTDSTGLAAELLERSGLVALRNVIDQQFAQRSDMLKAHTALVSLRRFVQTHPVPATP
YVIADIDPLLADTHAFEELRMLSLLPSRATTLNDDEIASLRRIIGGSGTSAAARLGLDPANSREA
PRAALAAAQHWRRRAAHPLNDPFTTRACRAAVRSAEAMVAEFSARR

FIG. 6